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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/757,426

01/15/2004

Takashi Horikawa

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3365

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7590

09/25/2006

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EXAMINER

CRAIG, DWIN M

ART UNIT

PAPER NUMBER

2123

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/757,426

Applicant(s)

HORIKAWA, TAKASHI

Examiner

Dwin M. Craig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/15/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-33 have been presented for examination.

Specification

2. A substitute specification including the claims are required pursuant to 37 CFR 1.125(a) because the specification appears to be a machine translation from Japanese and is filled with examples of idiomatic English;

For example, on page 2 of the specification is the following:

“As set forth in the above, in the former conventional technology, the performance of the development system has been evaluated for the first time in the join test phase when the entire system starts to operate in most cases.”

As disclosed many of the verb and noun tenses are incorrect as well as the sentence construction being awkward and confusing, further it is unclear as to what is the *join test phase* and what is meant by the phrase, “*when the entire system starts in most cases*” the examiner is confused, in what case does the *entire system* not start?

Another example from page 6 of the specification is the following:

“According to a seventh aspect of, the present invention, there is provided a method of predicting a performance of a system constructed by a technique of combining a plurality of software components, the system performance prediction method based on software component performance measurements, comprising the steps of:”

As disclosed, the current language is verbose and confusing it is unclear what is meant by the phrase, “*there is a method of predicting a performance of a system*” the examiner is

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confused, are the Applicant's referring to the system they have previously discussed or is there another system that has not been yet been discussed that is now being described?

Another example is from page 12, where the specification reads; *Determine operating conditions, under which individual software components operate, from the software components and the requests constituting the processing content of the transaction to be processed by the system.*

It is unclear if the operating conditions are being determined from just the *software components* or from the *transaction requests* or both.

Another example is from page 16 where the specification reads; *"The component performance measurement means 20 measures the system resource utilizations of the individual software components by an event trace technique using both of a kernel probe and an application probe."*

The noun and adjective tenses are incorrect relative to the beginning of the sentence for the phrases, *a kernel probe* and *an application probe* also, it is unclear from the disclosed sentence if the *component performance measurement means* is measuring the *system resource utilizations* or if the discussed *event trace technique* is measuring the *system resource utilizations*.

Another example is from page 20 where the specification reads; *"The test driver 25 inputs operating conditions controllable in the side of issuing the processing request as parameters among the factors determining the CPU time of the measured component 22, issues a processing request (request a) to the measured component 22, and receives a processing result (response a)."*

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The following phrase is unclear, *in the side of issuing the processing request*, the examiner is confused and it is unclear what is being disclosed in regards as to which *side* is *issuing the processing request* and further how the process request is being issued from *in the side*.

2.1 A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Claim objections

3. There are two claims that are numbered claim 22. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

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The second misnumbered claim 22 has been renumbered 32.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Applicant's claims are claiming *software per se* and are not currently directed towards statutory subject matter, note the following from the MPEP section 2106 Patentable Subject Matter, Computer Related Inventions...

Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process and Office personnel should treat a claim for a computer program, without the computer-readable medium needed to realize the computer program's functionality, as nonstatutory functional descriptive material.

When a computer program is claimed in a process where the computer is executing the computer program's instructions, Office personnel should treat the claim as a process claim.

4.1 Applicant's current claim language fails to disclose a *useful, concrete and tangible result* as required by the 35 USC § 101. In order for the claims to be directed towards a *tangible and useful result* the claims need to disclose the *storage* of said result in a computer *memory* or *display* said result on a computer output device, such as a monitor or display.

Amendment is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 5, 7, 11, 12, 16, 18, 22, 23, 27, 29 and 33 are rejected under 35 USC 102(e) as being anticipated by US Patent 6,542,854 Yang.

5.1 As regards independent claims 1, 12 and 23 and using independent claim 1 as an example, Yang discloses, *a mechanism for predicting a performance of a system constructed by a technique of combining a plurality of software components, the system performance prediction mechanism based on software component performance measurements, comprising: component performance measurement means for previously measuring system resource utilizations of individual software components constituting the system* (Col. 2 lines 48-65 "...Standard benchmarks are performed for certain software *applications*..." and Col. 4 lines 43-65 and Col. 7 lines 30-67 and Figures 2&3 Col. 8 lines 1-16, "...The present invention provides a mechanism that allows the system to be described both in terms of what *components* it could possibly have..." and *storing them in a performance database* (Col. 6 lines 37-65); *transaction performance prediction means for predicting a system resource utilization of a transaction to be processed by the system from a result of searching a performance database in consideration of the software components and requests constituting a processing content of the transaction;* (Col. 6 lines 37-65 "...also used to model a transaction according to the invention..." and Col. 25 lines 13-20 and Col. 26 lines 13-20 *et seq.*) *and system performance prediction means for predicting a system resource utilization of the entire system by inputting the system resource utilization of the transaction predicted by the transaction performance prediction means into a system*

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performance prediction model (Col. 7 lines 56-67 and Col. 8 lines 1-16 "...Similar to the way the workload definition *model*..." *et seq.*).

5.2 As regards dependent claims 5, 16 and 27 and using dependent claim 5 as an example, Yang discloses, *wherein the system resource utilization prediction of the entire system by said system performance prediction means is made by inputting the system resource utilizations predicted by said transaction performance prediction means with respect to individual transactions into the system performance prediction model together with a transaction execution ratio if there are plural types of transactions to be processed by the system and their execution ratio is previously defined as system design information* (Col. 8 lines 44-67 and Col. 9 lines 1-19, the Examiner notes that the disclosed measured parameters as disclosed, for example, "random physical read costs=%CPU/(random physical read/second)" is teaching an *execution ratio*).

5.3 As regards dependent claims 7, 11, 18, 22, 29 and 33 Yang discloses CPU time (Col. 29 lines 22-36, "Primary utilization is calculated from the total CPU time...").

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 2, 3, 4, 6, 8, 9, 10, 13, 14, 15, 17, 19, 20, 21, 24, 25, 26, 28, 30, 31 and 32

(renumbered claim 22) are rejected under 35 USC 103(a) as being unpatentable over US Patent 6,542,854 Yang in view of US Patent 6,145,121 Levy and in further view of US Patent 5,450,586 Kuzara.

6.1 As regards claims 2, 13 and 24 and using dependent claim 2 as an example, *Yang* teaches most all of the instant invention as applied to claims 1, 5, 7, 11, 12, 16, 18, 22, 23, 27, 29 and 33 above.

However, *Yang* fails to teach, *wherein the system resource utilization measurements of the individual software components by said component performance measurement means are made by analyzing an event trace obtained by a measurement using both of an application probe for detecting an event having been inserted in a test driver and occurred in a component to be measured and a kernel probe for detecting an event having been inserted in an operating system and occurred in a system to be measured using both of an application probe for detecting an event having been inserted in a test driver and occurred in a component to be measured and a kernel probe for detecting an event having been inserted in an operating system and occurred in a system to be measured.*

Levy teaches, *wherein the system resource utilization measurements of the individual software components by said component performance measurement means are made by analyzing an event trace* (Figure 1 references 210, 216, 215, 218, 226 and Figures 7a, 8c, 8e &

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17d and Col. 3 lines 52-67 and Col. 4 lines 50-62 and Col. 5 lines 20-43 and Col. 7 lines 10-50 and regarding the tracing Col. 9 lines 36-67 and Col. 10 lines 1-12 and Col. 10 lines 50 “...database layout *trace* and modified execution *trace*...” and Col. 10 lines 53-67 and Col. 11 lines 1-35 and Col. 12 lines 33-67 *et seq.*).

Kuzara teaches the functional equivalent to *using both of an application probe for detecting an event having been inserted in a test driver and occurred in a component to be measured and a kernel probe for detecting an event having been inserted in an operating system and occurred in a system to be measured* (Figure 3 references 306 & 308 and 302 and Figures 6, 9 & 10 and Col. 3 lines 9-58 and Col. 4 lines 48-67 “...A code marker is the smallest standard microprocessor transaction required to communicate desired information to a chosen collection tool...”).

Yang, Levy and *Kuzara* are analogous art because they are from the similar problem solving area of software performance analysis.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have modified the system performance measurement teachings of *Yang* with the kernel probe methods and event trace methods of *Kuzara* and *Levy*.

The suggestion to do so would have been to provide a method of optimally tuning a system in a manner that is flexible and provides a user with the benefit of controlling a plurality of modifications to that system, (see *Levy* Col. 7 lines 3-10) and to provide a means of benefiting software design teams to develop software systems in multitasking and object oriented systems (*Kuzara* Col. 4 lines 6-17).

Therefore, it would have been obvious to combine the teachings of *Kuzara* and *Levy* with the teachings of *Yang* to obtain the invention as specified in claims 2, 3, 4, 6, 8, 9, 10, 13, 14, 15, 17, 19, 20, 21, 24, 25, 26, 28, 30, 31 and 32 (renumbered claim 22).

6.2 As regards dependent claims 3, 14 and 25, neither *Yang* nor *Levy* expressly disclose, *wherein the system resource utilization measurements of the individual software components by said component performance measurement means are made by using a system resource utilization measuring function provided by basic software such as an operating system.*

However, *Kuzara* discloses *wherein the system resource utilization measurements of the individual software components by said component performance measurement means are made by using a system resource utilization measuring function provided by basic software such as an operating system* (Figure 3 references 306 & 308 and 302 and Figures 6, 9 & 10 and Col. 3 lines 9-58 and Col. 4 lines 48-67 "...A code marker is the smallest standard microprocessor transaction required to communicate desired information to a chosen collection tool...").

6.3 As regards dependent claims 4, 15 and 26 and using dependent claim 4 as an example, *Yang* teaches *combining the obtained results and inputting them into the system performance prediction model* (Col. 6 lines 5-67 and Figures 2 & 3), however *Yang* does not expressly disclose, *wherein the system resource utilization prediction of the entire system by said system performance prediction means is made by determining operating conditions, under which the software components operate, from the software components and requests constituting the processing content of the transaction to be processed by the system, determining system resource utilizations by searching the performance database using each software component and*

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operating conditions as keys, predicting the system resource utilization of the transaction by combining results of searching for the system resource utilizations of all software components involved in processing of a transaction important in the system performance.

However *Levy* discloses, *wherein the system resource utilization prediction of the entire system by said system performance prediction means is made by determining operating conditions, under which the software components operate, from the software components and requests constituting the processing content of the transaction to be processed by the system* (Figures 3, 4, 5, & 6 and Col. 13 lines 65-67 and Col. 14 and Col. 15 lines 1-18), and *Kuzara* discloses *determining system resource utilizations by searching the performance database using each software component and operating conditions as keys* (markers Figure 10 and Col. 8 lines 14-44), *predicting the system resource utilization of the transaction by combining results of searching for the system resource utilizations of all software components involved in processing of a transaction important in the system performance* (Figure 3 reference 108 and Figure 2 and Col. 8 lines 14-63 *et seq.*).

6.4 As regards dependent claims 6, 17 and 28 and using dependent claim 6 as an example, *Yang* teaches, *wherein the system resource utilization prediction of the entire system by said system performance prediction means is made by inputting the system resource utilizations predicted by said transaction performance prediction means with respect to individual transactions into the system performance prediction model together with a transaction execution ratio if there are plural types of transactions to be processed by the system and their execution ratio is previously defined as system design information* (Col. 8 lines 44-67 and Col. 9 lines 1-19,

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the Examiner notes that the disclosed measured parameters as disclosed, for example, “random physical read costs=%CPU/(random physical read/second)” is teaching an *execution ratio*).

6.5 As regards dependent claims 8-10, 19-21, 30, 31 and renumbered claim 22 now numbered claim 32, *Yang* discloses CPU time (Col. 29 lines 22-36, “Primary utilization is calculated from the total *CPU time*...”).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. US Patent 5,881,268 discloses performance modeling of an object oriented software system (Abstract and Figure 2).

2. “A Performance Interface for Component-Based Applications” discloses measuring the performance of a software application, all 8 pages.

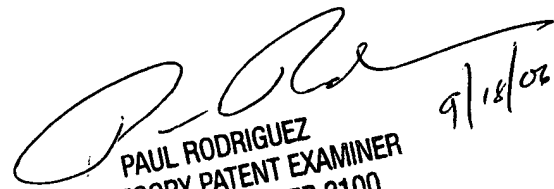
7.1 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul L. Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dwin McTaggart Craig


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9/18/02